



MICHIGAN DEPARTMENT OF NATURAL RESOURCES
Wildlife Division Report No. 3436
April 2005

Printed by Authority of: P.A. 451 of 1994
Total Number of Copies Printed:85
Cost per Copy:.....\$0.84
Total Cost:\$71.40

Michigan Department of Natural Resources



EVOLVING BIRD CONSERVATION OPPORTUNITIES IN MICHIGAN

Gregory J. Soulliere and Thomas E. Oliver

ABSTRACT

The theme of joint ventures is one of relationships that build synergies, resulting in enhanced outcomes with smaller investments by individual partners. Groups and individuals with varied resources and expertise work together, reducing overlap in effort and creating greater efficiencies. Success of the North American Waterfowl Management Plan, and its associated habitat-delivery programs via joint ventures, has resulted in an unprecedented surge in new bird conservation initiatives. Other large-scale bird conservation programs which have evolved in recent years include the North American Landbird Conservation Plan, the United States Shorebird Conservation Plan, and the North American Waterbird Conservation Plan. In addition, a North American Bird Conservation Initiative was also established to facilitate linkages among the individual bird plans. The collective efforts of these continental bird conservation initiatives may seem overwhelming to wildlife professionals being asked to participate in them. However, becoming familiar with plan vision statements, regional priorities, and those species which are of greatest concern should make implementation more manageable. Coupled with a list of priority bird species, this report should provide Michigan wildlife planners and managers with background information helpful for integrated bird conservation in this region.

The term "joint venture" originated in the business community and has been commonly used when referring to temporary strategic alliances between business partners (Schermerhorn et al. 1991). As an example, American automobile manufactures have cooperated with foreign



A contribution of Federal Aid in Wildlife Restoration, Michigan Project W-147-R

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IC 2033 (04/021/2005)

auto makers to produce higher quality cars and trucks for a lower price to the consumer. This collaboration, or sharing of information, technology, and parts has resulted in “American-made” autos that often have foreign components and foreign vehicles produced using American technologies. Some American-brand vehicles are now assembled outside the U.S. with components from several countries. In addition to production, businesses also combine resources on marketing strategies and many other aspects of today’s profit-based economy.

The theme of joint ventures is one of relationships that build synergies, resulting in enhanced outcomes with smaller investments. Partners with varied resources and expertise work together, achieving collective goals with reduced overlap in effort and thus greater efficiency. The North American Waterfowl Management Plan (NAWMP) was the first continental-scale wildlife conservation plan developed using a joint-venture (JV) approach. The NAWMP was established in the mid-1980s by government and non-government partners who had a common vision: to restore duck populations to levels observed during the 1970s, a period of relatively high duck abundance. The NAWMP has 15 recognized habitat-based JVs across the continent and three species-oriented JVs for individual waterfowl species or groups of concern (black duck, sea duck, and arctic geese). Major NAWMP partners have included state and federal agencies and large private (non-government) conservation organizations. Tribal efforts, local conservation groups, and some individuals have also been an important part of many NAWMP projects.

Michigan is within the Upper Mississippi River & Great Lakes Region (UMR&GLR) Joint Venture of the NAWMP. In addition to Michigan, the JV encompasses all or portions of Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, Ohio, and Wisconsin. Partners have mutually agreed to safeguard the waterfowl habitats of the nation’s only inland coastal area – the Great Lakes – plus interior wetlands, including the floodplains of four of the country’s major river systems – the Missouri, Upper Mississippi, Illinois, and Ohio. Conservation goals within the JV include protection, restoration, and enhancement of several million acres of wetland and associated uplands for waterfowl and other wetland wildlife (USFWS 1998).

Achievements and support for the NAWMP have been impressive, largely due to the strength of JV partnerships. This success has not gone unnoticed by other migratory bird conservation groups, and the NAWMP has been gradually recognized as a “model” for successful bird conservation. Other landscape-scale conservation plans have recently been developed for migratory landbirds, shorebirds, and waterbirds (colonial nesting water birds and wading birds). During the last decade, the North American Bird Conservation Initiative (NABCI) evolved to help provide coordination between plans. And, in the continued spirit of partnerships, the Upper Mississippi River and Great Lakes Region JV has pledged to conduct all-bird conservation, accommodating other bird groups while implementing the NAWMP. The JV’s first priority will continue to be waterfowl, but management decision-making has expanded to include other bird conservation plans.

The collective efforts of JV partners and the various bird conservation plans may seem overwhelming, especially for those who have not been part of the evolution. The purpose of this paper is to familiarize readers with the NABCI and the four major bird conservation plans.

We have provided a section on the expanding role of the Joint Venture plus a brief background and vision for the NABCI and each of the major bird conservation plans. Finally, Michigan's list of priority bird species for each plan has been compiled. This information is intended to help make the plethora of bird conservation information more manageable for those implementing wildlife management in Michigan.

JOINT VENTURE EXPANDING ROLE

The North American Bird Conservation Initiative has prompted a need and desire to develop bird conservation delivery systems that build on both Joint Venture partnerships and the biological foundation of Bird Conservation Regions (BCRs). In 2000, the U.S. NABCI Committee agreed to promote conservation delivery via existing and new Joint Ventures as "one layer of carpet" nationwide, thus eliminating redundant partnership structures and separate biological planning processes (Smith 2004). BCRs (Figure 1) are physiographic areas with similar landscape community types and bird conservation issues (NABCI 2000a and 2000b). BCRs are also subdivided to improve planning at smaller scales. Communication links among wildlife professionals working locally in BCRs and via Joint Ventures will help meld efforts to improve results at various scales. The key to realizing this continental, step-down concept lies in assuring a network exists among the individual pieces. Collectively, this network of biological expertise organized along BCRs, combined with the implementation capacity of dynamic partnerships organized in Joint Ventures, can best deliver integrated bird conservation (Smith 2004).

Joint Ventures can expand and integrate with BCRs in a variety of ways. First, when revising a JV implementation strategy, BCRs can be used as a basis for landscape planning. Bird Conservation Regions should function as a primary unit within which biological foundation issues are resolved, the landscape configuration of sustainable bird habitats is designed, and priority projects originate. JVs periodically update implementation plans, including implementation strategies for each state, and "stepping down" from Level 1 BCRs to specific focus areas within states is a logical approach when updating a JV implementation plan. Second, JV Management Boards must develop the capacity to objectively evaluate project integrity and seek funding for projects addressing all priority birds and associated habitats across the JV. Each JV has a Management Board chaired by a JV Coordinator. Boards consist of government representatives from each state, plus other members representing federal agencies and private, non-government conservation organizations (e.g., Ducks Unlimited, The Nature Conservancy, and Pheasants Forever). The UMR&GLR Management Board is advised on scientific issues by a recently established Technical Committee chaired by the JV Science Coordinator (recently established position). Improving the science and efficiency of migratory bird habitat conservation is the role of the JV Science Coordinator, working in cooperation with the JV Technical Committee.

To date, JV priorities have been to:

- Establish partnerships of conservation agencies and non-government organizations interested in waterfowl and other wetland-wildlife conservation,
- Establish and support a Joint Venture Staff: JV Coordinator, Assistant Coordinator, and Science Coordinator,

- Establish capacity for biological planning, implementation, and program evaluation,
- Establish a technical committee to solicit, review, and prioritize project proposals that relate to population and habitat objectives, and
- Expand the role of the Joint Venture so that it addresses the full spectrum of bird conservation (i.e., all-bird conservation effort).

NABCI Bird Conservation Regions completely cover the United States, but with the exception of the NAWMP and associated North American Wetlands Conservation Act (NAWCA) grants, there have been few financial resources available to build a biological foundation for an all-bird conservation plan.

New JV priorities should include:

- Strengthening the biological foundation for waterfowl and other bird species which occur within Bird Conservation Regions, including coordination and prioritization of inventory, monitoring, and research, and
- Developing the necessary landscape design and specific habitat objectives to sustain bird populations, with emphasis on species of greatest concern

BIRD CONSERVATION INITIATIVES

The following information provides background on NABCI and the primary bird conservation plans encompassed by NABCI. Note the areas of overlap and opportunities to conduct habitat management that benefit multiple bird groups simultaneously.

North American Bird Conservation Initiative (NABCI 2000a and NABCI 2000b)
www.nabci-us.org

Vision: Populations and habitats of North America's birds protected, restored or enhanced through coordinated efforts at international, national, regional, state and local levels, guided by sound science and effective management.

The surge of interest in birds has spurred development of several unprecedented bird conservation initiatives (NABCI 2000b). These include the North American Waterfowl Management Plan, the North American Landbird Conservation Plan, the United States Shorebird Conservation Plan, and the North American Waterbird Conservation Plan. NABCI is facilitating linkages among these individual initiatives, both within the United States and among the United States, Mexico, and Canada. The primary role of the NABCI is to coordinate, not duplicate, the efforts of the four major bird plans. More specifically, NABCI intends to 1) increase the effectiveness of existing and new initiatives, 2) foster greater cooperation among the nations and peoples of the continent, and 3) build on existing structures such as joint ventures, and stimulate new joint ventures and mechanisms as appropriate.

NABCI also has established ecologically distinct regions in North America with similar bird communities, habitats, and resource management issues, known as Bird Conservation Regions (NABCI 2000b). BCRs are a single application of the scale-flexible hierarchical

framework of nested ecological units delineated by the North American Commission for Environmental Cooperation (CEC 1998). The CEC framework comprises a hierarchy of 4 levels of ecoregions. At each step-down in level, spatial resolution increases and ecoregions encompass areas that are progressively more similar in their biotic (e.g., plant and wildlife) and abiotic (e.g., soils, drainage patterns, temperature, and annual precipitation) characteristics.

BCRs may be partitioned into smaller ecological units when finer scale conservation planning, implementation, and evaluation are necessary. Conversely, BCRs may be aggregated to facilitate conservation partnerships throughout the annual range of a group of species, recognizing that migratory species may use multiple BCRs throughout their annual life cycle. BCRs also facilitate domestic and international cooperation in bird conservation because these areas of relatively homogenous bird habitats and communities traverse state, provincial, and national borders.

The intent of establishing BCRs was to facilitate communication among the bird conservation initiatives, systematically and scientifically apportion North America into conservation units, facilitate a regional approach to bird conservation, promote new and expanded partnerships, and identify overlapping or conflicting conservation priorities (CEC 1998). As integrated bird conservation progresses in North America, BCRs should ultimately function as the primary units to resolve biological foundation issues, design landscape configurations of sustainable bird habitats, and originate priority projects (Smith 2004). The state of Michigan is comprised of three BCRs (Figure 1), including the Boreal Hardwood Transition (BCR 12), the Prairie Hardwood Transition (BCR 23), and a small area in the Eastern Tallgrass Prairie (BCR 22).

North American Waterfowl Management Plan (NAWMP 1998 and NAWMP 2004)
<http://northamerican.fws.gov/NAWMP/nawmphp.htm>

Vision: To sustain abundant waterfowl populations by conserving landscapes, through partnerships, guided by sound science.

First of the continental wildlife conservation plans, the NAWMP was developed in the mid-1980s by a group of government agencies and private organizations interested in and concerned about declining waterfowl populations. The principal goal of the NAWMP is to restore waterfowl populations to levels recorded during the 1970s, a period when waterfowl populations were considered to be at their highest during recent history. In an effort to reach defined waterfowl population targets, the NAWMP works through regional Joint Venture partnerships, to manage habitats important to waterfowl. Joint Ventures, which include federal, state, local, and tribal governments, conservation groups, businesses, and individuals, are designed to focus on aspects of concern identified in the NAWMP.

Specific goals in the NAWMP include 1) develop measurable, scale-specific management objectives, 2) expand monitoring and assessment capabilities, 3) design and carry out evaluations related to conservation strategies, 4) define and implement waterfowl conservation in a landscape context, and 5) implement community-based projects within a landscape context. In addition, the NAWMP intends to broaden partnerships with other

migratory bird conservation initiatives, and support and encourage conservation partnerships with communities.

The North American Wetland Conservation Act, passed in 1989, provided a funding source to assist in implementation of NAWMP projects. The 2004 update to the Plan combined core elements of the original 1986 Plan (and the 1994 and 1998 updates) with guidance addressing the issues and conditions of the 21st century.

North American Landbird Conservation Plan (PIF 2004)
www.partnersinflight.org

Vision: To ensure the long-term maintenance of healthy populations of native landbirds, through the development of voluntary, non-regulatory bird conservation plans that, proactively, provide frameworks to develop and implement habitat conservation actions on species identified as having the greatest need for conservation.

Bird researchers and conservationists from government agencies and private organizations observed the successes associated with the NAWMP, including legislative, funding, and management activities being dedicated to waterfowl conservation. Concern about significant population declines for several nongame migratory birds resulted in a “landbird” conservation initiative developed by a group called Partners In Flight. A publication highlighting 15 years of data from the North American Breeding Bird Survey (Robbins et al. 1986) was the impetus for the “Mitchell Amendment” [Public Law 100-653 (102 Stat. 3825)], an amendment to the U.S. Fish and Wildlife Conservation Act of 1980. The Mitchell Amendment requires the Department of Interior to “monitor and assess migratory nongame birds, determine the effects of environmental change and human activities, identify those candidates for endangered species listing, identify appropriate actions, and report to Congress ... at five year intervals on actions taken” (USFWS 2001). Building on this legislation, PIF was formed and established its guiding principles to restore populations of the most imperiled avian species and to prevent other birds from becoming endangered — “keeping common birds common.”

PIF developed 52 bird conservation plans based on physiographic regions which cover the continental United States. The two plans pertinent to Michigan are the Upper Great Lakes Plain Plan and the Boreal Hardwood Transition Plan. PIF recently released a new continental plan document, The North American Landbird Conservation Plan. It presents global population estimates for 448 species of North American landbirds, as well as continental-scale conservation and stewardship priorities.

United States Shorebird Conservation Plan (USSCP 2001)
<http://shorebirdplan.fws.gov>

Vision: To ensure that stable and self-sustaining populations of all shorebirds are distributed throughout their range and diversity of habitats in the United States and Western Hemisphere, and that species which have declined in distribution or

abundance are restored to their former status to the extent possible at costs acceptable to society.

Developed as a national partnership between federal and state agencies, non-governmental organizations, and researchers, the USSCP is committed to the conservation of shorebirds that depend on wetland communities. The USSCP calls for the development of integrated management practices and regional conservation planning to protect shorebirds. The plan identifies goals at several scales, including the hemispheric goal, which addresses the need for international cooperation. National and regional goals and potential management activities are also provided. They generally aim to 1) develop monitoring programs related to shorebirds, 2) conduct research on factors limiting populations of declining shorebirds, and 3) focus on reducing limiting factors and developing coordinated shorebird conservation efforts.

The primary goal for the USSCP Upper Mississippi Valley/Great Lakes regional plan (i.e., step-down from USSCP) is to ensure the availability of shorebird foraging and nesting sites over a range of climatic conditions by protecting, restoring, and managing a variety of shorebird habitat types. Specific management activities include adopting management techniques that integrate region-specific knowledge of wetland dynamics and life history strategies of shorebird species, and conducting water-level manipulation and other management activities (e.g., burning, discing, etc.), at intensively managed wetland sites to assure benefits to shorebird species.

The USSCP adopted the goals and objectives of the NAWMP Upper Mississippi River & Great Lakes Region JV because of the focus on providing complexes of ephemeral and permanent wetlands with associated upland plant communities. By expanding the infrastructure and partnerships already available through the NAWMP Joint Venture to address shorebird needs, critical habitat needs for shorebirds may be provided even though some community types for shorebirds may differ from those of particular waterfowl species.

Specific research needs for shorebirds in the JV area include determining 1) regional abundance, distribution, chronology, and population trends, 2) management activity influence on shorebirds and their invertebrate food base, 3) wetland distribution and habitat conditions during variable climatic conditions, and 4) impacts of human disturbance on shorebirds.

North American Waterbird Conservation Plan (NAWCP 2002)
www.waterbirdconservation.org

Vision: To restore and sustain the distribution, diversity, and abundance of breeding, migratory, and non-breeding populations of waterbirds throughout the lands and waters of North America, Central America, and the Caribbean.

Several bird conservation stakeholders recognized that the needs of seabirds, colonial-nesting waterbirds, and marsh wading birds were not being adequately addressed in the decision-making processes of the other bird plans. Initially launched in 1998, the Waterbird Conservation for the Americas initiative was a voluntary partnership dedicated to the conservation of waterbirds. The 2002 plan document (North American Waterbird

Conservation Plan) emphasizes the importance of scale and habitat diversity for this bird group, and encompasses North and Central America, the Caribbean, and the open waters of the Atlantic and Pacific Oceans.

Specific Goals of NAWCP include 1) ensure sustainable abundance, diversity, and distribution of waterbird species, 2) protect, restore, and manage key sites and high quality habitat for waterbirds, 3) disseminate information on waterbird conservation to decision makers, the public, and those whose actions impact waterbirds, and 4) coordinate and integrate waterbird conservation efforts, guided by common principles, across geo-political boundaries.

PRIORITY SPECIES AND CONCLUSIONS

The collective efforts of the NABCI and its associated continental bird conservation plans may seem overwhelming. However, if wildlife managers become familiar with the background and visions of each plan, plus those species which are of greatest concern, the task becomes more manageable. A list of bird species which occur in Michigan, and identified as requiring conservation assistance due to habitat threats and/or population status, is provided by bird conservation group (Table 1). In addition, species listed as endangered or threatened in Michigan are also provided to enhance bird management planning.

Continual improvement in decision making based on contemporary biological, ecological, and economic principles has been a recurring theme in recent years for Michigan wildlife managers. The individual bird conservation plans encourage the use of these principles and emphasize enhanced monitoring, management evaluation, and adaptive management based on research findings. Integrated bird conservation is at an exciting threshold in Michigan and North America. Ultimately, this planning and coordination process should enhance bird conservation and general wildlife management in our state.

ACKNOWLEDGEMENTS

Craig Albright, Michael Bailey, Penney Melchoir, William Moritz, and Barb Pardo reviewed an early version of this report.

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Table 1. Bird species which occur in Michigan and have been listed in continental bird-conservation plans as "high" or "moderately-high" concern due to habitat threats, declining abundance, and/or limited distribution. Species listed as state endangered (E) or threatened (T) by the Michigan Natural Features Inventory are also identified.

Plan and species common name	Scientific name	Season occurring	MNFI status
North American Waterfowl Management Plan, 2003 Update - 2nd draft			
American Black Duck	<i>Anas rubripes</i>	B M W	
Mallard ^a	<i>Anas platyrhynchos</i>	B M W	
Common goldeneye	<i>Bucephala clangula</i>	B M W	
Blue-winged teal	<i>Anas discors</i>	B M	
American widgeon	<i>Anas americana</i>	B M	
Redhead	<i>Aythya americana</i>	B M	
Northern Pintail	<i>Anas acuta</i>	M	
Canvasback	<i>Aythya valisineria</i>	M	
Lesser Scaup	<i>Aythya affinis</i>	M	
Southern James Bay Canada Goose	<i>Branta canadensis</i>	M	
PIF North American Landbird Conservation Plan, 2004 ("watch list" species)			
Rusty Blackbird	<i>Euphagus carolinus</i>	B M W	
Short-eared Owl	<i>Asio flammeus</i>	B M	E
Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	B M	
Olive-sided Flycatcher	<i>Contopus cooperi</i>	B M	
Willow Flycatcher	<i>Empidonax traillii</i>	B M	
Wood Thrush	<i>Hylocichla mustelina</i>	B M	
Blue-winged Warbler	<i>Vermivora pinus</i>	B M	
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	B M	
Kirtland's Warbler	<i>Dendroica kirtlandii</i>	B M	E
Bay-breasted Warbler	<i>Dendroica castanea</i>	B M	
Canada Warbler	<i>Wilsonia canadensis</i>	B M	
Henslow's Sparrow	<i>Ammodramus henslowii</i>	B M	T
Dickcissel	<i>Spiza americana</i>	B M	
United States Shorebird Conservation Plan, 2001			
American Woodcock	<i>Scolopax minor</i>	B M	
Piping Plover	<i>Charadrius melodus</i>	B M	E
Upland Sandpiper	<i>Bartramia longicauda</i>	B M	
Wilson's Phalarope	<i>Phalaropus lobatus</i>	B M	
Marbled Godwit	<i>Limosa fedoa</i>	M	
Greater Yellowlegs	<i>Tringa melanoleuca</i>	M	
Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>	M	
Short-billed Dowitcher	<i>Limnodromus griseus</i>	M	
Whimbrel	<i>Numenius phaeopus</i>	M	
North American Waterbird Conservation Plan, 2002			
Common Loon	<i>Gavia immer</i>	B M	T
American Bittern	<i>Botaurus lentiginosus</i>	B M	
Least Bittern	<i>Ixobrychus exilis</i>	B M	T
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	B M	
Yellow-crowned Night Heron	<i>Nycticorax violacea</i>	B M	

Yellow Rail	<i>Coturnicops noveboracensis</i>	B M	T
Black Rail	<i>Laterallus jamaicensis</i>	B M	
King Rail	<i>Rallus elegans</i>	B M	E
Least Tern	<i>Sterna antillarum</i>	B M	
Common Tern	<i>Sterna hirundo</i>	B M	T
Forster's Tern	<i>Sterna forsteri</i>	B M	
Black Tern	<i>Chlidonias niger</i>	B M	
Other MNFI "listed species"			
Peregrine Falcon	<i>Falco peregrinus</i>	B M	E
Barn Owl	<i>Tyto alba</i>	B M	E
Prairie Warbler	<i>Dendroica discolor</i>	B M	E
Trumpeter Swan	<i>Cygnus buccinator</i>	B M W	T
Bald Eagle	<i>Haliaeetus leucocephalus</i>	B M W	T
Long-eared Owl	<i>Asio otus</i>	B M W	T
Osprey	<i>Pandion haliaetus</i>	B M	T
Red-shouldered Hawk	<i>Buteo lineatus</i>	B M	T
Merlin	<i>Falco columbarius</i>	B M	T
Caspian Tern	<i>Sterna caspia</i>	B M	T
Yellow-throated Warbler	<i>Dendroica dominica</i>	B M	T

^aMallards included as "high priority" species in NAWMP because of relative importance to sport harvest.

Figure 1. North American Bird Conservation Initiative Bird Conservation Regions within the Upper Mississippi River and Great Lakes Joint Venture Region.

